

**REMARKS**

Claims 1, 4-15, 17-20 and 22-24 are pending in this application.

Claims 1, 4-11, 14-15, 17 and 22-24 were rejected, and claims 12-13 and 18-20 were allowed.

Claims 1 and 22 have been amended, and claims 4-5, 9-11 and 15 have been canceled without disclaiming their subject matter.

**I. CLAIMS REJECTIONS**

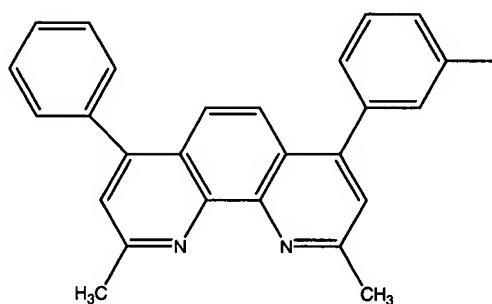
Claim 15 stands rejected under 35 U.S.C. 102(b) as being anticipated by Higashi *et al.*, U.S. Patent No. 6,406,804.

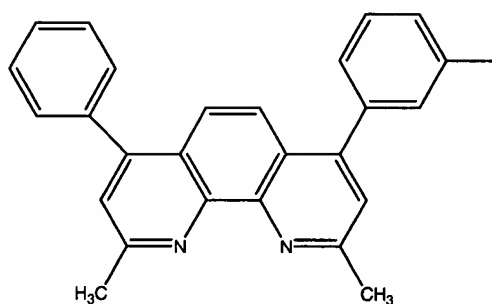
Claim 15 stands rejected under 35 U.S.C. 102(b) as being anticipated by Higashi *et al.* U.S. Patent Publication No. 2002/0136924.

Claims 1, 4-11, 14, 17 and 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi *et al.*, U.S. Patent No. 6,406,804 in view of Smith *et al.*, U.S. Patent Publication No. 2004-0263045.

Claims 1, 4-11, 14, 17 and 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Higashi *et al.*, U.S. Patent Publication No. 2002/0136924 in view of Smith *et al.*, U.S. Patent Publication No. 2004-0263045.

Since U.S. Patent Publication No. 2002/0136924 is a continuation of U.S. Patent No. 6,406,804, and the examiner's rejection reasonings are the same, the traversals of the rejections are made together.



The examiner improperly argued that  is an electron acceptor group.

The fact that the above chemical entity is a fused cyclic system does not necessarily mean that any fused cyclic system is an electron acceptor group. The fused cyclic system in claim 9 is an electron acceptor group, whereas the fused cyclic system in claims 15 and 23 is an electron donor group, and two fused cyclic systems in claim 14 are recited as an electron donor group and the electron acceptor group. The feature of "fused cyclic system" in claims 9, 14, 15 and 23 is a separate limitation from the feature of "electron acceptor group" or the feature of "electron donor group".

The applicant believes that the above cited chemical entity is not an electron acceptor group. The electron acceptor should be a chemical entity that accepts electrons transferred to it from another compound. For example, examples of acceptors include, but are not limited to, "oxygen, nitrate, iron (III), manganese (IV), sulfate, carbon dioxide, or in some microorganisms the chlorinated solvents such as tetrachloroethylene (PCE), trichloroethylene (TCE), dichloroethene (DCE), and vinyl chloride (VC)." (See <

[http://en.wikipedia.org/wiki/Electron\\_acceptor](http://en.wikipedia.org/wiki/Electron_acceptor)>.) Accordingly, the applicant believes that the above cited chemical entity in Higashi *et al.* is not regarded as an electron acceptor.

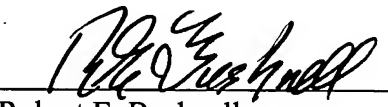
Therefore, claim 15 is not anticipated by Higashi *et al.*, U.S. Patent No. 6,406,804 or U.S. Patent Publication No. 2004-0263045, and claims 1, 4-11, 14, 17 and 22-24 are not obvious over Higashi *et al.*, U.S. Patent No. 6,406,804 in view of Smith *et al.*, U.S. Patent Publication No. 2004-0263045.

Withdrawal of the rejections is respectfully requested.

No fees are incurred by this Amendment.

In view of the above, all claims are submitted to be allowable and this application is believed to be in condition to be passed to issue. Reconsideration of the rejections is requested. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

Respectfully submitted,

  
Robert E. Bushnell,  
Attorney for the Applicant  
Registration No.: 27,774

1522 "K" Street N.W., Suite 300  
Washington, D.C. 20005  
(202) 638-5740

Folio: P56987  
Date: 9/27/07  
I.D.: 'REB/JHP